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› ECO-WORTHY 100 Watt Monocrystalline Solar Panel User Manual

ECO-WORTHY L02M100-1

ECO-WORTHY 100 Watt Monocrystalline Solar Panel User Manual

Model: L02M100-1

Your reliable partner for off-grid power solutions.

1. INTRODUCTION AND KEY FEATURES

The ECO-WORTHY 100 Watt Monocrystalline Solar Panel is a high-efficiency module designed for various off-grid applications, including RVs, marine vessels, boats, caravans, and residential setups. It utilizes advanced PERC technology to maximize sunlight conversion and offers robust durability for long-term performance.



Front and back view of the ECO-WORTHY 100 Watt Monocrystalline Solar Panel, showcasing its sleek design and robust construction.

400 WH ELECTRICITY PER DAY

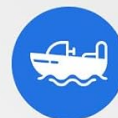
Under Standard Conditions



Home



RV



Boat

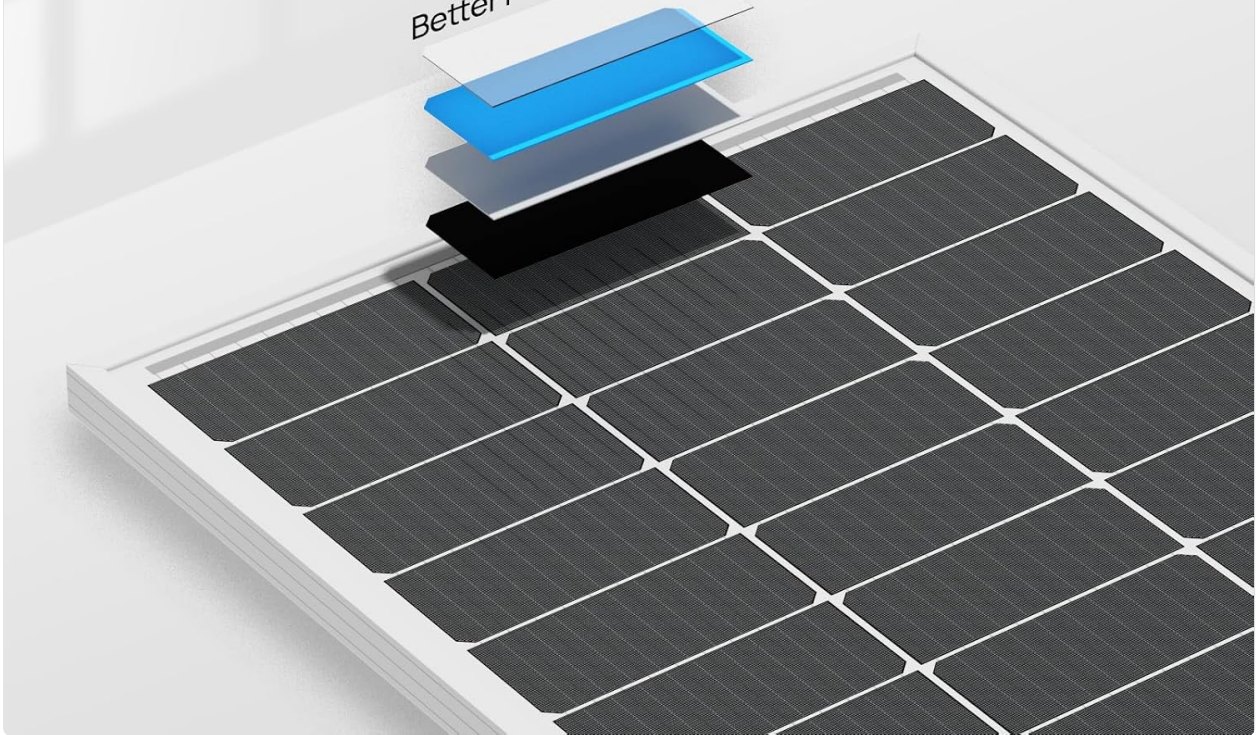
The 100W solar panel is capable of providing approximately 400 Wh of electricity per day under standard conditions, making it suitable for diverse applications such as homes, RVs, and boats.

PERC TECHNOLOGY

Capture Every Beam Of Light

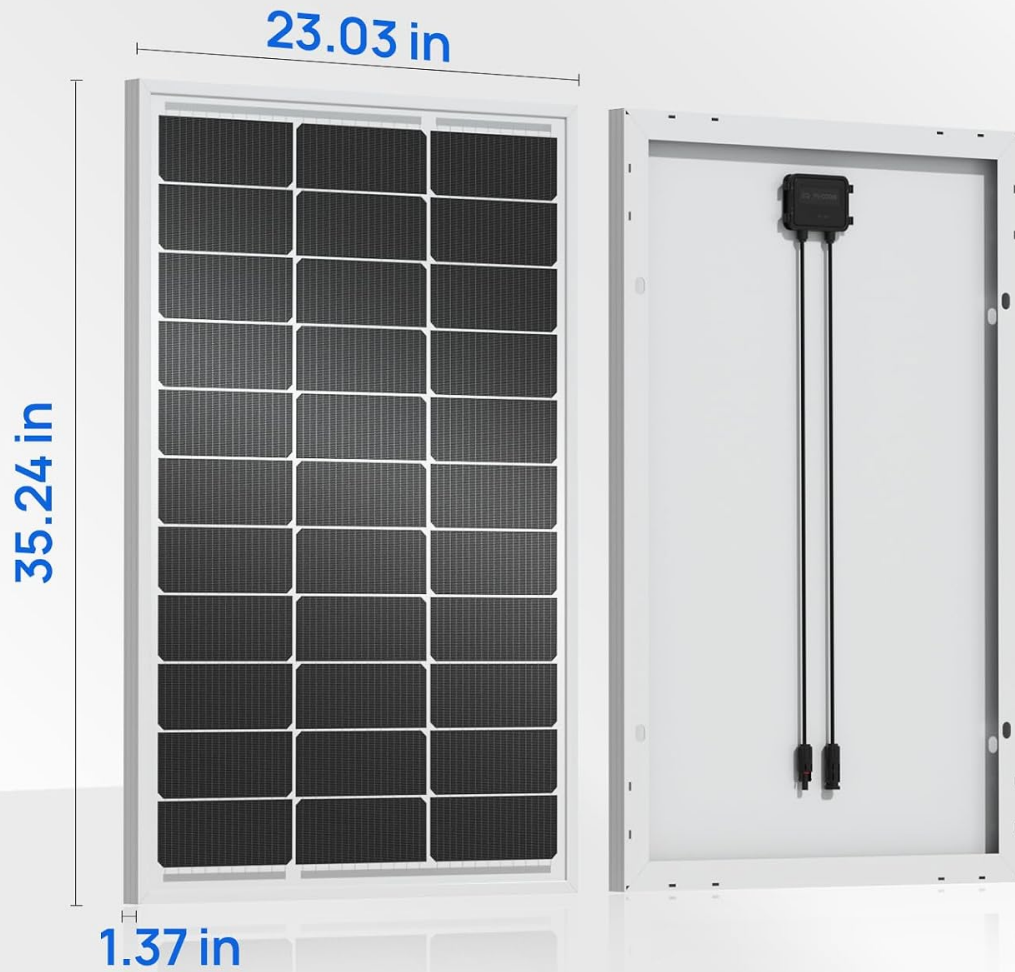
23%

Efficiency Improvement
Better Performance and Power Output



This panel incorporates PERC (Passivated Emitter and Rear Cell) technology, which significantly increases cell efficiency to 23% by enhancing sunlight reflection within the silicon-based substrate.

SIZE: 35.24 X 23.03 X 1.37 INCHES
WEIGHT: 14.55 POUNDS



The ECO-WORTHY 100W solar panel measures 35.24 x 23.03 x 1.37 inches and weighs 14.55 pounds, offering a compact and manageable size for installation.

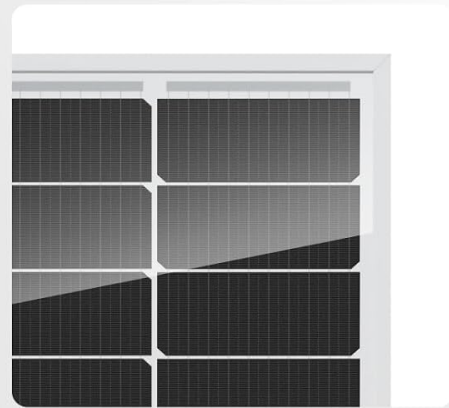
ALL WEATHER READY

IP67

* **IP65** Rated J-Box and
IP67 Rated Solar Connector

Designed to be all-weather ready, the panel features an IP65 rated junction box and IP67 rated solar connectors, ensuring reliable performance in various environmental conditions.

LAST FOR 25 YEARS



Tempered glass
corrosion-resistant



Aluminum frames

Constructed with impact-resistant tempered glass and corrosion-resistant aluminum frames, this panel is built to last for up to 25 years, providing long-term energy generation.

2. SPECIFICATIONS

Parameter	Value
Rated Power (STC)	100W $\pm 3\%$
Solar Cell Type	Monocrystalline
Open-Circuit Voltage (Voc)	22.7V $\pm 3\%$
Short-Circuit Current (Isc)	5.55A $\pm 3\%$
Max. Power Voltage (Vmp)	19.5V $\pm 3\%$
Max. Power Current (Imp)	5.13A $\pm 3\%$
Max. System Voltage	1000V

Max. Series Fuse Rating	10A
Dimensions (L x W x H)	35.24" x 23.03" x 1.37" (895 x 585 x 35 mm)
Weight	14.55 lbs (6.6 kg)
Material	Aluminum, Glass
Connector Type	MC4
Special Feature	Waterproof

All technical data at STC (Standard Test Conditions): AM=1.5, Irradiance=1000W/m², Tc=25°C.

3. SETUP & INSTALLATION

Proper installation is crucial for optimal performance and longevity of your solar panel. The ECO-WORTHY 100W panel features pre-drilled holes for easy mounting and is compatible with various 12V battery systems, allowing for flexible expansion of your existing setup.



Close-up of the panel's dimensions, four pre-drilled mounting holes for easy installation, IP67 waterproof solar connectors, and an IP65 waterproof junction box.



For maximum sunlight exposure and efficiency, solar panels are typically suggested to be installed at an angle of 30-45 degrees. Avoid installations where direct sunlight is limited.



Wiring diagram for a typical 12V solar system, showing connections from multiple solar panels to a charge controller and then to a 12V battery.



Wiring diagram for a typical 24V solar system, illustrating how multiple panels can be connected in series and parallel to achieve the desired voltage and charge a 24V battery bank.

This video demonstrates various applications of ECO-WORTHY solar products, including installation on RVs, powering appliances, and charging devices, showcasing the versatility and ease of use of their solar solutions.

4. OPERATION

To ensure your ECO-WORTHY solar panel operates at its peak efficiency, consider the following factors for optimal power generation. The panel is designed to be a versatile power source for various needs.



Optimal power output (up to 400Wh) is achieved under specific conditions: cell temperature around 25°C, air mass of 1.5, and sufficient, durable light exposure.



Inaccurate test results can occur due to energy loss within the power station itself during charging or incorrect range selection and wiring position on measurement devices.



Solar panels seamlessly integrated onto an RV roof, providing reliable power for mobile living and adventures.



Solar panels installed on a boat, offering a clean and efficient power source for marine applications.



Solar panels installed on a house roof, providing sustainable energy for residential use and reducing reliance on traditional power grids.



A 100W solar panel integrated into a garage setup, connected to a 30A PWM charge controller and a battery, providing power for various garage needs.

5. MAINTENANCE

Regular maintenance ensures the longevity and efficiency of your ECO-WORTHY solar panel. Keep the panel surface clean from dust, dirt, and debris. Use a soft cloth and mild, non-abrasive cleaner with water. Inspect wiring and connections periodically for any signs of wear or damage. Ensure proper ventilation around the panel to prevent overheating, which can reduce efficiency.

6. TROUBLESHOOTING

If you experience issues with your solar panel, consider the following common troubleshooting steps:

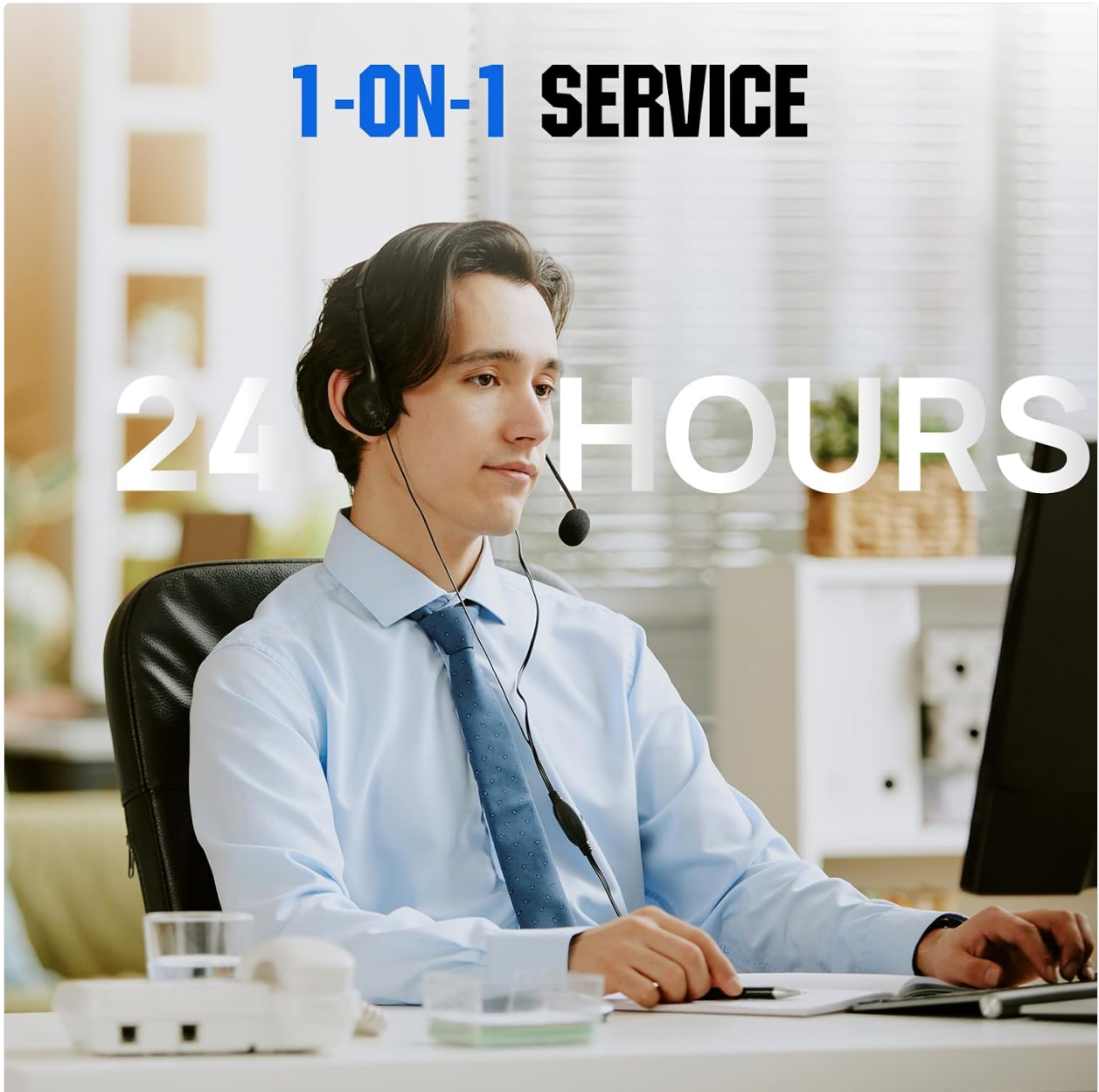
- **No Power Output:** Check all connections (MC4 connectors, junction box, charge controller) for secure and correct wiring. Ensure the panel is receiving adequate sunlight and is not shaded. Verify the charge controller settings are appropriate for your battery type.
- **Low Power Output:** Clean the panel surface thoroughly. Check for partial shading from trees, buildings, or other obstructions. Verify the panel's angle and orientation to the sun. Ensure the battery connected is not already full or experiencing issues.
- **Overheating:** Ensure there is sufficient airflow around the panel. Panels can lose efficiency when excessively hot. Consider adjusting mounting to allow for better ventilation.
- **Physical Damage:** Inspect the tempered glass for cracks and the aluminum frame for bends or

corrosion. While durable, severe impacts can cause damage.

7. WARRANTY & SUPPORT

The ECO-WORTHY 100 Watt Monocrystalline Solar Panel is built for durability and comes with a projected lifespan of 25 years, supported by its robust construction including an IP65 junction box, tempered glass, and corrosion-resistant aluminum frame.

ECO-WORTHY is committed to providing excellent customer service. We offer dedicated one-on-one customer service and lifelong worry-free technical support. Our Customer Service Team aims to reply within 12 hours during weekdays. For any questions or assistance, please do not hesitate to contact us.



Our dedicated customer service team is available to provide one-on-one support, ensuring your inquiries are addressed promptly, typically within 24 hours.
